

# Notice for TAIYO YUDEN products

Please read this notice before using the TAIYO YUDEN products.

## REMINDERS

### Product Information in this Catalog

Product information in this catalog is as of October 2019. All of the contents specified herein and production status of the products listed in this catalog are subject to change without notice due to technical improvement of our products, etc. Therefore, please check for the latest information carefully before practical application or use of our products.

Please note that TAIYO YUDEN shall not be in any way responsible for any damages and defects in products or equipment incorporating our products, which are caused under the conditions other than those specified in this catalog or individual product specification sheets.

### Approval of Product Specifications

Please contact TAIYO YUDEN for further details of product specifications as the individual product specification sheets are available. When using our products, please be sure to approve our product specifications or make a written agreement on the product specification with TAIYO YUDEN in advance.

### Pre-Evaluation in the Actual Equipment and Conditions

Please conduct validation and verification of our products in actual conditions of mounting and operating environment before using our products.

### Limited Application

#### 1. Equipment Intended for Use

The products listed in this catalog are intended for general-purpose and standard use in general electronic equipment (e.g., AV equipment, OA equipment, home electric appliances, office equipment, information and communication equipment including, without limitation, mobile phone, and PC) and other equipment specified in this catalog or the individual product specification sheets.

TAIYO YUDEN has the line-up of the products intended for use in automotive electronic equipment, telecommunications infrastructure and industrial equipment, or medical devices classified as GHTF Classes A to C (Japan Classes I to III). Therefore, when using our products for these equipment, please check available applications specified in this catalog or the individual product specification sheets and use the corresponding products.

#### 2. Equipment Requiring Inquiry

Please be sure to contact TAIYO YUDEN for further information before using the products listed in this catalog for the following equipment (excluding intended equipment as specified in this catalog or the individual product specification sheets) which may cause loss of human life, bodily injury, serious property damage and/or serious public impact due to a failure or defect of the products and/or malfunction attributed thereto.

- (1) Transportation equipment (automotive powertrain control system, train control system, and ship control system, etc.)
- (2) Traffic signal equipment
- (3) Disaster prevention equipment, crime prevention equipment
- (4) Medical devices classified as GHTF Class C (Japan Class III)
- (5) Highly public information network equipment, data-processing equipment (telephone exchange, and base station, etc.)
- (6) Any other equipment requiring high levels of quality and/or reliability equal to the equipment listed above

#### 3. Equipment Prohibited for Use

Please do not incorporate our products into the following equipment requiring extremely high levels of safety and/or reliability.

- (1) Aerospace equipment (artificial satellite, rocket, etc.)
- (2) Aviation equipment <sup>\*1</sup>
- (3) Medical devices classified as GHTF Class D (Japan Class IV), implantable medical devices <sup>\*2</sup>

- (4) Power generation control equipment (nuclear power, hydroelectric power, thermal power plant control system, etc.)
- (5) Undersea equipment (submarine repeating equipment, underwater work equipment, etc.)
- (6) Military equipment
- (7) Any other equipment requiring extremely high levels of safety and/or reliability equal to the equipment listed above

\*Notes:

1. There is a possibility that our products can be used only for aviation equipment that does not directly affect the safe operation of aircraft (e.g., in-flight entertainment, cabin light, electric seat, cooking equipment) if such use meets requirements specified separately by TAIYO YUDEN. Please be sure to contact TAIYO YUDEN for further information before using our products for such aviation equipment.
2. Implantable medical devices contain not only internal unit which is implanted in a body, but also external unit which is connected to the internal unit.

#### 4. Limitation of Liability

Please note that unless you obtain prior written consent of TAIYO YUDEN, TAIYO YUDEN shall not be in any way responsible for any damages incurred by you or third parties arising from use of the products listed in this catalog for any equipment that is not intended for use by TAIYO YUDEN, or any equipment requiring inquiry to TAIYO YUDEN or prohibited for use by TAIYO YUDEN as described above.

### Safety Design

When using our products for high safety and/or reliability-required equipment or circuits, please fully perform safety and/or reliability evaluation. In addition, please install (i) systems equipped with a protection circuit and a protection device and/or (ii) systems equipped with a redundant circuit or other system to prevent an unsafe status in the event of a single fault for a failsafe design to ensure safety.

### Intellectual Property Rights

Information contained in this catalog is intended to convey examples of typical performances and/or applications of our products and is not intended to make any warranty with respect to the intellectual property rights or any other related rights of TAIYO YUDEN or any third parties nor grant any license under such rights.

### Limited Warranty

Please note that the scope of warranty for our products is limited to the delivered our products themselves and TAIYO YUDEN shall not be in any way responsible for any damages resulting from a failure or defect in our products. Notwithstanding the foregoing, if there is a written agreement (e.g., supply and purchase agreement, quality assurance agreement) signed by TAIYO YUDEN and your company, TAIYO YUDEN will warrant our products in accordance with such agreement.

### TAIYO YUDEN's Official Sales Channel

The contents of this catalog are applicable to our products which are purchased from our sales offices or authorized distributors (hereinafter "TAIYO YUDEN's official sales channel"). Please note that the contents of this catalog are not applicable to our products purchased from any seller other than TAIYO YUDEN's official sales channel.

### Caution for Export

Some of our products listed in this catalog may require specific procedures for export according to "U.S. Export Administration Regulations", "Foreign Exchange and Foreign Trade Control Law" of Japan, and other applicable regulations. Should you have any questions on this matter, please contact our sales staff.

# Wireless Module

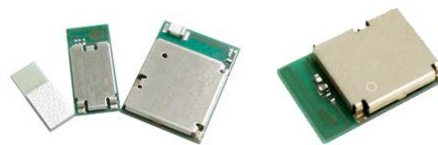
Our recommended Line Up of *Bluetooth*<sup>®</sup> and WLAN Modules

■ For Smartphone Peripheral & IoT Solution

Electricity/Light



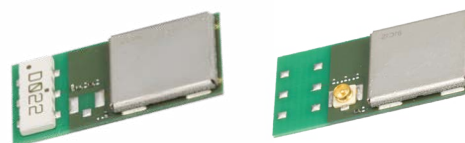
Security/Access



*Bluetooth*<sup>®</sup> low energy Module

■ For Industrial Market

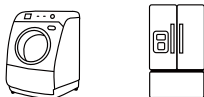
Handy Terminal / Mobile Printer



Original Antenna or RF Connector  
WLAN+BT Module

■ For IoT Solution & Industrial

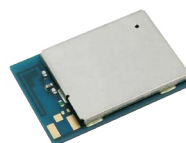
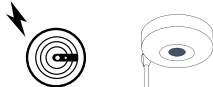
White Goods



Heating and Cooling



Alarm/Sensing



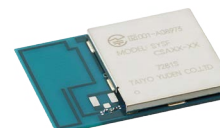
CPU Embedded  
WLAN Module



CPU & TAIYO YUDEN Software  
Embedded WLAN Module



2.4GHz & 5GHz Supported  
WLAN + BT Module



Sub-1GHz Module

※As this catalog includes some Wireless Modules under development, the specifications of such Modules are subjects to change without prior notice.  
Evaluation Kit for each module is available.

For the latest information, please visit our web site at <http://www.ty-top.com/> or feel free to contact our sales department.

※The *Bluetooth*<sup>®</sup> word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by TAIYO YUDEN CO., LTD. is under license.  
Other trademarks and trade names are those of their respective owners.

## ■ Bluetooth® low energy &amp; ANT Module

| Part number  | Function |            |                |     |         |         |         |         |          |                      |           | I/F  |     |     |     |     |     | Module type |     | Type approval |         |       |     |      | Remark |                                |
|--------------|----------|------------|----------------|-----|---------|---------|---------|---------|----------|----------------------|-----------|------|-----|-----|-----|-----|-----|-------------|-----|---------------|---------|-------|-----|------|--------|--------------------------------|
|              | BLE      | BT Classic | ANT            | NFC | 802.11a | 802.11b | 802.11g | 802.11n | 802.11ac | 802.15.4<br>(Thread) | 802.15.4g | UART | USB | PCM | SPI | I2C | I2S | SDIO        | SMD | Connector     | Antenna | Japan | FCC | ISED |        | CE                             |
| EYSHSNZWZ    | ○        |            | ○*             | ○   |         |         |         |         |          |                      |           | ○    |     |     | ○   | ○   | ○   |             | ○   |               | ○       | ○     | ○   | ○    | ○*     | Ultra Small, 64k RAM, BT5      |
| EYSLSNZWW    | ○        |            | ○ <sup>△</sup> |     |         |         |         |         |          |                      |           | ○    |     |     | ○   | ○   |     |             | ○   |               | ○       | ○     | ○   | ○    | ○*     | Ultra Small, 24k RAM, BT5      |
| EYSKJNUWB-WX | ○        |            |                |     |         |         |         |         |          |                      |           | ○    |     |     | ○   |     |     |             | ○   |               | ○       | ○     | ○   | ○    | ○*     | TY's APP, BT5                  |
| EYSKJNZWB    | ○        |            | ○ <sup>△</sup> | ○   |         |         |         |         |          | ○                    |           | ○    |     |     | ○   | ○   | ○   |             | ○   |               | ○       | ○     | ○   | ○    | ○*     | 256k RAM, BT5(Full)            |
| EYSHJNZWZ    | ○        |            | ○*             | ○   |         |         |         |         |          |                      |           | ○    |     |     | ○   | ○   | ○   | ○           | ○   |               | ○       | ○     | ○   | ○    | ○*     | 64k RAM, BT5                   |
| EYAGJNZXX    | ○        |            | ○              |     |         |         |         |         |          |                      |           | ○    |     |     | ○   | ○   |     |             | ○   |               | ○       | ○     | ○   | ○    | ○*     | 32k RAM                        |
| EYSGJNAWY-VX | ○        |            |                |     |         |         |         |         |          |                      |           | ○    |     |     |     |     |     |             | ○   |               | ○       | ○     | ○   | ○    | ○*     | TY's APP                       |
| EYSGJNZWY    | ○        |            |                |     |         |         |         |         |          |                      |           | ○    |     |     | ○   | ○   |     |             | ○   |               | ○       | ○     | ○   | ○    | ○*     | 32k RAM                        |
| EYSGJNZXX    | ○        |            |                |     |         |         |         |         |          |                      |           | ○    |     |     | ○   | ○   |     |             | ○   |               | ○       | ○     | ○   | ○    | ○*     | 16k RAM                        |
| EYSKBNWB-WX  | ○        |            |                |     |         |         |         |         |          |                      |           | ○    | ○   |     | ○   |     |     |             | ○   |               | ○       | ○     | ○   | ○    | ○*     | TY's APP, 32k X'tal, BT5       |
| EYSKBNZWB    | ○        |            | ○ <sup>△</sup> | ○   |         |         |         |         |          | ○                    |           | ○    | ○   |     | ○   | ○   | ○   |             | ○   |               | ○       | ○     | ○   | ○    | ○*     | 32k X'tal, 256k RAM, BT5(Full) |
| EYSHCNZWZ    | ○        |            | ○*             | ○   |         |         |         |         |          |                      |           | ○    |     |     | ○   | ○   | ○   | ○           | ○   |               | ○       | ○     | ○   | ○    | ○**    | 32k X'tal, 64k RAM, BT5        |
| EYSLCNZWW    | ○        |            | ○ <sup>△</sup> |     |         |         |         |         |          |                      |           | ○    |     |     | ○   | ○   |     |             | ○   |               | ○       | ○     | ○   | ○    | ○*     | 32k X'tal, 24k RAM, BT5        |
| EYSGCNAWY-VX | ○        |            |                |     |         |         |         |         |          |                      |           | ○    |     |     |     |     |     |             | ○   |               | ○       | ○     | ○   | ○    | ○*     | TY's APP, 32k X'tal            |
| EYSGCNZWY    | ○        |            |                |     |         |         |         |         |          |                      |           | ○    |     |     | ○   | ○   |     |             | ○   |               | ○       | ○     | ○   | ○    | ○*     | 32k X'tal, 16k RAM             |
| EYSGCNZXX    | ○        |            |                |     |         |         |         |         |          |                      |           | ○    |     |     | ○   | ○   |     |             | ○   |               | ○       | ○     | ○   | ○    | ○*     | 32k X'tal, 16k RAM             |

\*Softdevice S332

△Plan to support soft devices.

\*ETSI EN 300 328 v2.1.1 Conducted Test Report Available

\*\*Complies with standards required by RED (2014/53/EU)

## ■ Sub-1GHz Module

| Part number  | Function |            |     |     |         |         |         |         |          |                      |           | I/F  |     |     |     |     |     | Module type |     | Type approval |         |       |     | Remark |      |                       |
|--------------|----------|------------|-----|-----|---------|---------|---------|---------|----------|----------------------|-----------|------|-----|-----|-----|-----|-----|-------------|-----|---------------|---------|-------|-----|--------|------|-----------------------|
|              | BLE      | BT Classic | ANT | NFC | 802.11a | 802.11b | 802.11g | 802.11n | 802.11ac | 802.15.4<br>(Thread) | 802.15.4g | UART | USB | PCM | SPI | I2C | I2S | SDIO        | SMD | Connector     | Antenna | Japan | FCC |        | ISED | CE                    |
| SYSFCSAXX-XX |          |            |     |     |         |         |         |         |          |                      | ○         | ○    |     |     |     |     |     |             | ○   |               | ○       | ○     |     |        |      | 32k X'tal, 31Multihop |

## ■ CPU Embedded WLAN Module

| Part number  | Function |            |     |     |         |         |         |         |          |                      | I/F       |      |     |     |     |     | Module type |      | Type approval |           |         |       |     | Remark |      |                           |
|--------------|----------|------------|-----|-----|---------|---------|---------|---------|----------|----------------------|-----------|------|-----|-----|-----|-----|-------------|------|---------------|-----------|---------|-------|-----|--------|------|---------------------------|
|              | BLE      | BT Classic | ANT | NFC | 802.11a | 802.11b | 802.11g | 802.11n | 802.11ac | 802.15.4<br>(Thread) | 802.15.4g | UART | USB | PCM | SPI | I2C | I2S         | SDIO | SMD           | Connector | Antenna | Japan | FCC |        | ISED | CE                        |
| WYSACVLAY-WX |          |            |     |     |         | ○       | ○       | ○       |          |                      |           | ○    |     |     |     |     |             |      | ○             |           | ○       | ○     | ○   | ○      | ○*   | w/Cortex M4, 4M-Flash ROM |
| WYSACVLAY-XZ |          |            |     |     |         | ○       | ○       | ○       |          |                      |           | ○    |     |     | ○   |     |             |      | ○             |           | ○       | ○     | ○   | ○      | ○*   | w/Cortex M4, 4M-Flash ROM |

\*ETSI EN 300 328 v2.1.1 Conducted Test Report Available

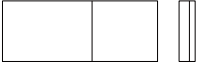
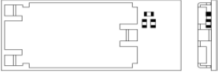
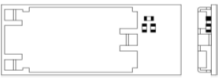
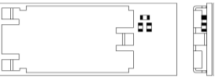
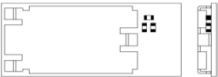
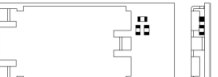
## ■ WLAN+BT Module

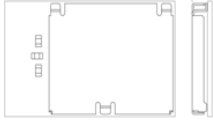
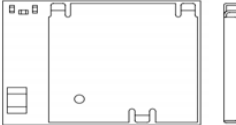
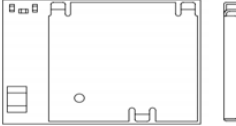
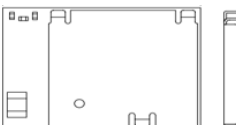
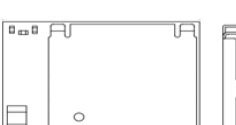
| Part number | Function |            |     |     |         |         |         |         |          |                   |           | I/F  |     |     |     |     |     | Module type |     | Type approval |         |       |     |      | Remark |                         |                                |
|-------------|----------|------------|-----|-----|---------|---------|---------|---------|----------|-------------------|-----------|------|-----|-----|-----|-----|-----|-------------|-----|---------------|---------|-------|-----|------|--------|-------------------------|--------------------------------|
|             | BLE      | BT Classic | ANT | NFC | 802.11a | 802.11b | 802.11g | 802.11n | 802.11ac | 802.15.4 (Thread) | 802.15.4g | UART | USB | PCM | SPI | I2C | I2S | SDIO        | SMD | Connector     | Antenna | Japan | FCC | ISED |        | CE                      |                                |
| WYSAGVDXG   | ○        | ○          |     |     | ○       | ○       | ○       | ○       | ○        |                   |           |      |     | ○   |     |     |     |             | ○   | ○             |         | ○     | ○   | ○    | ○*     | Dual Band Antenna(Chip) |                                |
| WYSEGVDXG   | ○        | ○          |     |     | ○       | ○       | ○       | ○       | ○        |                   |           |      |     | ○   |     |     |     |             | ○   | ○             |         | △**   | ○   | ○    | ○      |                         | RF Connector (Limited antenna) |
| WYSBHVXG    | ○        | ○          |     |     | ○       | ○       | ○       | ○       | ○        |                   |           |      |     | ○   |     |     |     |             | ○   | ○             |         |       |     |      |        |                         |                                |

\*ETSI EN 300 328 &amp; ETSI EN 301 893 v2.1.1 Conducted Test Report Available

\*\*Embedded RF Connector for Limited Antenna

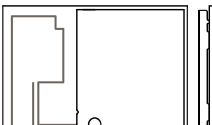
## ■ Bluetooth® low energy Module

| Part number                | Function                                                                   | Module type                                                       | I/F                                         | Feature                                                                                                                                                                                                      | Outline [mm] (Height : Maximum)                                                                           |
|----------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| EYSHSNZWZ<br>(nRF52832)    | Bluetooth® low energy v5.0<br>& NFC-A Type-2                               | BLE Slave and Master<br>SMD type                                  | UART<br>I2C<br>SPI<br>I2S<br>PDM<br>15 GPIO | w/CPU (Cortex M4F)<br>Antenna<br>512KB Flash<br>64KB RAM<br>FCC/ISED/Japan certified<br>Complies with standards required by<br>RED (2014/53/EU)<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available | 3.25 x 8.55 x 0.85<br> |
| EYSLSNZWV<br>(nRF52810)    | Bluetooth® low energy v5.0<br>(2Mbps Data Rate support)                    | BLE Slave and Master<br>SMD type                                  | UART<br>I2C<br>SPI<br>PDM<br>15 GPIO        | w/CPU (Cortex M4)<br>Antenna<br>192KB Flash<br>24KB RAM<br>FCC/ISED/Japan certified<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available                                                             | 3.25 x 8.55 x 1.00<br> |
| EYSKJNUWB-WX<br>(nRF52840) | Bluetooth® low energy v5.0                                                 | BLE Slave and Master<br>SMD type<br>TAIYO YUDEN Software Embedded | UART<br>SPI                                 | w/CPU (Cortex M4F)<br>Antenna<br>FCC/ISED/Japan certified<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available                                                                                       | 5.1 x 11.3 x 1.3<br>   |
| EYSKJNZWB<br>(nRF52840)    | Bluetooth® low energy v5.0 (Full)<br>& 802.15.4 (Thread)<br>& NFC-A Type-2 | BLE Slave and Master<br>SMD type                                  | UART<br>I2C<br>SPI<br>I2S<br>PDM<br>15 GPIO | w/CPU (Cortex M4F)<br>Antenna<br>1MB Flash<br>256KB RAM<br>FCC/ISED/Japan certified<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available                                                             | 5.1 x 11.3 x 1.3<br>   |
| EYSHJNZWZ<br>(nRF52832)    | Bluetooth® low energy v5.0<br>& NFC-A Type-2                               | BLE Slave and Master<br>SMD type                                  | UART<br>I2C<br>SPI<br>I2S<br>PDM<br>15 GPIO | w/CPU (Cortex M4F)<br>Antenna<br>512KB Flash<br>64KB RAM<br>FCC/ISED/Japan certified<br>Complies with standards required by<br>RED (2014/53/EU)<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available | 5.1 x 11.3 x 1.3<br>   |
| EYAGJNZXX<br>(nRF51422)    | Bluetooth® low energy v4.2<br>& ANT                                        | BLE Slave<br>SMD type                                             | UART<br>I2C<br>SPI<br>14 GPIO               | w/CPU (Cortex M0)<br>Antenna<br>256KB Flash<br>32KB RAM<br>FCC/ISED/Japan certified<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available                                                             | 5.1 x 11.3 x 1.3<br> |
| EYSGJNAWY-VX<br>(nRF51822) | Bluetooth® low energy v4.2                                                 | BLE Slave and Master<br>SMD type<br>TAIYO YUDEN Software Embedded | UART                                        | w/CPU (Cortex M0)<br>Antenna<br>FCC/ISED/Japan certified<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available                                                                                        | 5.1 x 11.3 x 1.3<br> |
| EYSGJNZWY<br>(nRF51822)    | Bluetooth® low energy v4.2 (*)                                             | BLE Slave and Master<br>SMD type                                  | UART<br>I2C<br>SPI<br>14 GPIO               | w/CPU (Cortex M0)<br>Antenna<br>256KB Flash<br>32KB RAM<br>FCC/ISED/Japan certified<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available                                                             | 5.1 x 11.3 x 1.3<br> |
| EYSGJNZXX<br>(nRF51822)    | Bluetooth® low energy v4.2 (*)                                             | BLE Slave and Master<br>SMD type                                  | UART<br>I2C<br>SPI<br>14 GPIO               | w/CPU (Cortex M0)<br>Antenna<br>256KB Flash<br>16KB RAM<br>FCC/ISED/Japan certified<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available                                                             | 5.1 x 11.3 x 1.3<br> |

| Part number                | Function                                                                   | Module type                                                       | I/F                                                | Feature                                                                                                                                                                                                                       | Outline [mm](Height : Maximum)                                                                            |
|----------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| EYSKBNWUB-WX<br>(nRF52840) | Bluetooth® low energy v5.0                                                 | BLE Slave and Master<br>SMD type<br>TAIYO YUDEN Software Embedded | UART<br>USB<br>SPI                                 | w/CPU (Cortex M4F)<br>32kHz Crystal<br>Antenna<br>FCC/ISED/Japan certified<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available                                                                                       | 10.0 x 15.4 x 2.0<br>  |
| EYSKBNZWB<br>(nRF52840)    | Bluetooth® low energy v5.0 (Full)<br>& 802.15.4 (Thread)<br>& NFC-A Type-2 | BLE Slave and Master<br>SMD type                                  | UART<br>USB<br>I2C<br>SPI<br>I2S<br>PDM<br>46 GPIO | w/CPU (Cortex M4F)<br>32kHz Crystal<br>Antenna<br>1MB Flash<br>256KB RAM<br>FCC/ISED/Japan certified<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available                                                             | 10.0 x 15.4 x 2.0<br>  |
| EYSHCNZWW<br>(nRF52832)    | Bluetooth® low energy v5.0<br>& NFC-A Type-2                               | BLE Slave and Master<br>NFC-A Type-2<br>SMD type                  | UART<br>I2C<br>SPI<br>I2S<br>PDM<br>30 GPIO        | w/CPU (Cortex M4F)<br>Antenna<br>512KB Flash<br>64KB RAM<br>32kHz Crystal<br>FCC/ISED/Japan certified<br>Complies with standards required by<br>RED (2014/53/EU)<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available | 9.6 x 12.9 x 2.0<br>   |
| EYSLCNZWW<br>(nRF52810)    | Bluetooth® low energy v5.0<br>(2Mbps Data Rate support)                    | BLE Slave and Master<br>SMD type                                  | UART<br>I2C<br>SPI<br>PDM<br>30 GPIO               | w/CPU (Cortex M4)<br>Antenna<br>192KB Flash<br>24KB RAM<br>32kHz Crystal<br>FCC/ISED/Japan certified<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available                                                             | 9.6 x 12.9 x 2.0<br>   |
| EYSGNAWY-VX<br>(nRF51822)  | Bluetooth® low energy v4.2                                                 | BLE Slave and Master<br>SMD type<br>TAIYO YUDEN Software Embedded | UART                                               | w/CPU (Cortex M0)<br>Antenna<br>32kHz Crystal<br>FCC/ISED/Japan certified<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available                                                                                        | 9.6 x 12.9 x 2.0<br>  |
| EYSGNZWY<br>(nRF51822)     | Bluetooth® low energy v4.2 (*)                                             | BLE Slave and Master<br>SMD type                                  | UART<br>I2C<br>SPI<br>29 GPIO                      | w/CPU (Cortex M0)<br>Antenna<br>256KB Flash<br>32KB RAM<br>32kHz Crystal<br>FCC/ISED/Japan certified<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available                                                             | 9.6 x 12.9 x 2.0<br> |
| EYSGNZXX<br>(nRF51822)     | Bluetooth® low energy v4.2 (*)                                             | BLE Slave and Master<br>SMD type                                  | UART<br>I2C<br>SPI<br>29 GPIO                      | w/CPU (Cortex M0)<br>Antenna<br>256KB Flash<br>16KB RAM<br>32kHz Crystal<br>FCC/ISED/Japan certified<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available                                                             | 9.6 x 12.9 x 2.0<br> |

(\*) Supported by S130

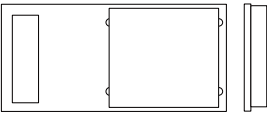
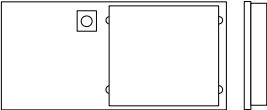
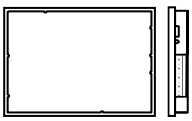
## ■ Sub-1GHz Module

| Part number                | Function                                                 | Module type                               | I/F  | Feature                                                      | Outline [mm](Height : Maximum)                                                                             |
|----------------------------|----------------------------------------------------------|-------------------------------------------|------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| SYSFCSAXX-XX<br>(nRF52840) | 920MHz band wireless module<br>Compliant IEEE802.15.4g/e | SMD type<br>TAIYO YUDEN Software Embedded | UART | Antenna<br>Japan certified<br>Singlehop and Multihop network | 21.0 x 30.0 x 2.6<br> |

## ■ CPU Embedded WLAN Module

| Part number   | Function        | Module type                               | I/F         | Feature                                                                                                                                                              | Outline [mm] (Height : Maximum)                                                                          |
|---------------|-----------------|-------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| WYSACVLAY-WX  | IEEE802.11b/g/n | SMD type<br>TAIYO YUDEN Software Embedded | UART        | Integrated System Clock<br>Antenna<br>Support Micro AP<br>FCC/ISED/Japan certified<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available<br>W/CPU (Cortex M4) | 14.0 x 21.4 x 2.4<br> |
| WYSACVLXAY-XZ | IEEE802.11b/g/n | SMD type                                  | UART<br>SPI | Integrated System Clock<br>Antenna<br>Support Micro AP<br>FCC/ISED/Japan certified<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available<br>W/CPU (Cortex M4) | 14.0 x 21.4 x 2.4<br> |

## ■ WLAN+BT Module

| Part number | Function                                                   | Module type | I/F         | Feature                                                                                                                                                                                                                                           | Outline [mm] (Height : Maximum)                                                                           |
|-------------|------------------------------------------------------------|-------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| WYSAGVDXG   | IEEE802.11ac/a/b/g/n+Bluetooth® 4.2<br>(Chip antenna Type) | SMD type    | SDIO<br>PCM | Integrated System Clock<br>2.4GHz & 5GHz<br>11ac(HT80)<br>Dual Band compatible Chip Antenna<br>FCC/ISED/Japan certified<br>ETSI EN 300 328 v2.1.1 Conducted<br>Test Report Available<br>ETSI EN 301 893 v2.1.1 Conducted<br>Test Report Available | 12.0 x 26.0 x 2.0<br>  |
| WYSEGVDXG   | IEEE802.11ac/a/b/g/n+Bluetooth® 4.2<br>(RF connector Type) | SMD type    | SDIO<br>PCM | Integrated System Clock<br>2.4GHz & 5GHz<br>11ac(HT80)<br>U.FL connector for external antenna<br>FCC/ISED/Japan certified                                                                                                                         | 12.0 x 26.0 x 2.0<br> |
| WYSBHVXG    | IEEE802.11ac/a/b/g/n+Bluetooth® 4.2                        | SMD type    | SDIO<br>PCM | Integrated System Clock<br>2.4GHz & 5GHz<br>11ac(HT80)                                                                                                                                                                                            | 8.9 x 12.6 x 1.9<br> |

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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- Поставка сложных, дефицитных, либо снятых с производства позиций;
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- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,  
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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